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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,713	04/27/2005	Seung-Hyun Kim	3884-0124PUS1	8958
2292 7590 08/23/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER PALO, FRANCIS T	
			ART UNIT 3644	PAPER NUMBER
			NOTIFICATION DATE 08/23/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/532,713	Applicant(s) KIM, SEUNG-HYUN	
	Examiner Francis T. Palo	Art Unit 3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment Arguments

Applicant's arguments by amendment filed 5/22/07 have been fully considered but they are not persuasive.

Regarding Applicant's comments therein the comparative table submitted with the response filed 5/22/07:

1a): **Nilsson '633** teaches encapsulation of seed for direct seeding (preferably a ball-shape) preferably made of compressed peat and when necessary provided with additives such as nutrients; Nilsson does not specifically recite growth hormones as claimed.

Melvoid '989 teaches as prior art, mixing peat moss with a synthetic resin, glue or binder and fertilizer ingredients such as claimed, and **Warner '165** teaches pellets can contain other ingredients including plant growth assistants of which GA is readable thereon.

1b): Applicant's product by process recitation of 1b) does not serve to distinguish over the shaped peat moss pellet of Nilsson, as claimed.

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1c): While Nilsson is silent as to the water content range as claimed, the reference teaches desired swelling properties of the capsule may be obtained by substantially compressing the cover materials; Nilsson further teaches storing the peat balls in the absence of moisture due to their high moisture-absorbing capacity. In the alternative, **Melvoid '989** teaches the drying should preferably be conducted while maintaining the horticultural value of the peat moss, and that typical advantageous moisture contents for compression, range from about 15-20% as claimed.

1d): Nilsson is specific to encapsulating seed; **Chapman '841** can be relied upon for at least contemplating a **bulb**, seed or shoot planted in a sufficiently hard and form-retaining unit made from a mixture of peat moss and fertilizer as claimed (col.-1, line-68 thereabout), in the 1956 patent.

1e): Nilsson teaches the seed capsules may be put directly on the ground (col.-3, line-31 thereabout), that is, sown without covering with soil as claimed.

In conclusion, in view of the guidance provided by the Supreme Court in *KSR*, it would have been obvious to combine the prior art teachings of **Nilsson '633**, **Melvoid '989**, **Warner '165** and **Chapman '841** according to known methods to yield predictable results.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1 and 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "**bulbous plants**" is unclear, as applicant's experimental data is based on lily main bud and potato samples, while potato is conventionally understood to be tuberous rather than bulbous; further, the recitation of "the bulbous plants inserted therein" in 1d) is unclear as applicant teaches encapsulating lily main bud rather than bulbous plants as claimed.

Claim Objections

Claims 1e), 7 and 8 are objected to because of the following informalities:

The step recited in 1e) is incomplete, and claims 7 and 8 are redundant to claim-1 and should be canceled. Appropriate correction is required:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 6-8 are rejected under 35 U.S.C. 103(a),
as being unpatentable over **Nilsson** (US 4,628,633),
in view of **Melvoid** (US 3,883,989), **Warner** (US 4,551,165)
and **Chapman** (US 2,757,841).

Regarding amended **claim-1**:

Nilsson '633 teaches a cultivation method for seed plants; specifically, "A seed ball in accordance with figure-1 may be prepared from peat (which optionally may be mixed with various additives, such as nutritive salts.....)", see col.-4, line-21 thereabout.

Nilsson further optionally teaches the use of a water-soluble binder (col.-1, line-65 thereabout) and spraying with a suitable solution of binding agent (col.-2, line-5 thereabout).

Nilsson while teaching "when necessary the capsule material may be provided with additives.....", (col.-3, line-18 thereabout) is not specific to a plant growth hormone as claimed.

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Melvoid '989 teaches growing plants in expanded peat moss units produced by intermixing an **aqueous** bituminous emulsion with peat moss, drying and compressing portions to form rigid bodies (abstract); Melvoid further teaches in the Background of the Invention, "mixing the peat moss with a synthetic resin, glue or binder" (col.-1, line-22 thereabout) is old in the art, and further discloses "nitrogen, phosphorous and potassium sources, are mixed with the peat moss prior to addition of the emulsion (water-soluble glue, as claimed), see col.-7, line-4 thereabout.

Warner '165 teaches "although crumbly, peat can be made more coherent by use of an inexpensive binder without interfering with the other properties of the pellet" (col.-2, line-12 thereabout), and further that "pellets can contain other ingredients including..... plant growth assistants" (col.-5, line-18 thereabout).

It is submitted that all the elements claimed in **1a)** of the instant invention were known in the prior art and that one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and that the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. That is, while **Nilsson '633** teaches mixing peat with additives such as nutrients and contemplates the use of water-soluble glue, **Melvoid '989** specifically teaches water-soluble glue, nitrogen, phosphorous and potassium sources mixed with peat, while **Warner '165** teaches mixing peat with a binder and other ingredients such as plant growth assistants, of which gibberellic acid is well known.

Regarding the product by process step recited in **1b)** of the instant claim, the recitation of compressing and forming a pellet by dividing the mixture into a lid and a base as broadly claimed, does not serve to distinguish over the shaped peat moss pellet of Nilsson. Specifically, Nilsson teaches, "the cover material may, e.g., first be compressed into a disc, loaf or the like, which is then optionally divided in to pieces and compressed to form the individual capsule parts" (col.-2, line-45 thereabout).

Regarding the drying step recited in **1c)** of the instant claim, while Nilsson is silent as to the water content range as claimed, the reference teaches desired swelling properties of the capsule may be obtained by substantially compressing the cover materials, and Nilsson further teaches storing the peat balls in the absence of moisture due to their high moisture-absorbing capacity.

In the alternative, **Melvoid '989** teaches the drying should preferably be conducted while maintaining the horticultural value of the peat moss, and that typical advantageous moisture contents for compression, range from about 15-20% as claimed.

It is submitted, that all the elements claimed in 1c) of the instant invention were known in the prior art and that one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and that the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. That is, while **Nilsson '633** is silent as to the well known as received and ultimate end use moisture characteristics of peat moss, **Melvoid '989** provides an extensive background as to the typical moisture contents (col.-2, line-35

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thereabout) of standard commercial peat moss (25-50%) of which the instant claim overlaps in the dried form (15-25%), further, that typical advantageous moisture contents for compression, range from about 15-20% as compared to the recited range of 15-25% as claimed.

Regarding the insertion of the bulbous plants in the dried base, covering with the lid and compressing as claimed in **1d**), and in consideration of the indefiniteness rejection made above, Nilsson while teaching the use of any shape to correspond to the seed encapsulated therein (specifically a ball-shaped or pellet-like cover; see col.-2), is silent as to inserting bulbous plants as claimed.

Chapman '841 can be relied upon for at least contemplating a **bulb**, seed or shoot planted in a sufficiently hard and form-retaining unit made from a mixture of peat moss and fertilizer as claimed (col.-1, line-68 thereabout), in the 1956 patent.

It is submitted, that all the elements claimed in 1c) of the instant invention were known in the prior art and that one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and that the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. That is, while **Nilsson '633** is silent as to inserting bulbous plants therein the lidded peat capsule as claimed, the prior art teaches encapsulating a **bulb**, seed or **shoot**, and therefore, a person of ordinary skill in the art would have good reason to pursue the known options within his or her technical grasp, that is, encapsulating a bulb as claimed and as taught by Chapman, and if this leads to the

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anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.

Regarding the sowing step as incompletely recited in **1e)** of the instant claim, Nilsson teaches the seed capsules may be put directly on the ground (col.-3, line-31 thereabout), that is, sown without covering with soil as claimed.

Regarding **new claim-6**:

The discussion above regarding claim-1 is relied upon.

Nilsson teaches sugar syrup and wood fiber solution as binding agents, which are readable on water-soluble glues such as vegetative cement as claimed.

Regarding **new claims 7 and 8**:

The discussion above regarding claim-1 is relied upon.

The limitations of the instant claims have been sufficiently discussed above in the rejection of claim-1.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Francis T. Palo whose telephone number is 571-272-6907. The examiner can normally be reached on M-Tu.,Th.-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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Francis T. Palo

Francis T. Palo
Primary Examiner
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